

Clock Oscillators Surface Mount Type

KC7050A-C3 Series



CMOS/ 3.3V/ 7.0×5.0mm



RoHS Compliant

Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage $V_{CC} = 3.3V$
- $\pm 25 \times 10^{-6}$, $\pm 20 \times 10^{-6}$ available

Table 1

Stability	Operating Temperature Range (°C)	Note
Code	$\times 10^{-6}$	
0	± 50	Standard specifications
S	± 30	With only certain frequencies
U	± 25	
W	± 20	
F	± 100	
G	± 50	
6	± 50	-40 to +105

How to Order

KC7050A 25.0000 C 3 0 E 00
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Series
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (3.3V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ INH Function (45/ 55%, Stand-by)
- ⑦ Customer Special Model Suffix (STD Specification is "00")

Packaging (Tape & Reel 1000 pcs./ reel)

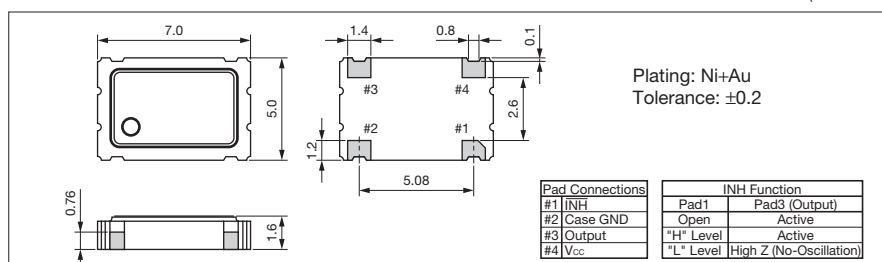
Specifications

Item	Symbol	Conditions	Min.	Max.	Units
Output Frequency Range	f_o		1.8	170	MHz
Frequency Tolerance	f_{tol}	Initial tolerance, Operating temperature range, Rated power supply voltage change, Load change, Aging (1 year @25°C), Shock and vibration	Op. Temp.: -40 to +85°C	-100	+100
			Op. Temp.: -10 to +70°C/ -40 to +85°C/ -40 to +105°C	-50	+50
			Op. Temp.: -10 to +70°C	-30	+30
			Op. Temp.: -10 to +70°C	-25	+25
			Op. Temp.: -10 to +70°C	-20	+20
Storage Temperature Range	T_{stg}		-55	+125	°C
Operating Temperature Range	T_{use}	Standard Specifications	-10	+70	°C
		Extend (Option)	-40	+85	
Max. Supply Voltage	—	$f_o < 135\text{MHz}$	-0.5	+7.0	V
		$f_o \geq 135\text{MHz}$	-0.5	+5.0	
Supply Voltage	V_{CC}	Freq. Tol.Code: 0, S, F	+2.97	+3.63	V
		Freq. Tol.Code: U, G, 6	+3.14	+3.46	
		Freq. Tol.Code: W	+3.20	+3.40	
Current Consumption (Maximum Loaded)	I_{CC}	$1.8 \leq f_o \leq 20\text{MHz}$	—	10	mA
		$20 < f_o \leq 40\text{MHz}$	—	15	
		$40 < f_o \leq 60\text{MHz}$	—	30	
		$60 < f_o \leq 100\text{MHz}$	—	35	
		$100 < f_o \leq 135\text{MHz}$	—	45	
		$135 < f_o \leq 170\text{MHz}$	—	60	
Stand-by Current	I_{std}		—	10	μA
Symmetry	SYM	@50% V_{CC}	45	55	%
Rise/ Fall Time (10% V_{CC} to 90% V_{CC} Maximum Loaded)	t_r/ t_f	$1.8 \leq f_o \leq 26\text{MHz}$	—	10	ns
		$26 < f_o \leq 45\text{MHz}$	—	8	
		$45 < f_o \leq 100\text{MHz}$	—	5	
		$100 < f_o \leq 170\text{MHz}$	—	2.5	
Low Level Output Voltage	V_{OL}	$I_{OL} = 8\text{mA}$	—	10% V_{CC}	V
High Level Output Voltage	V_{OH}	$I_{OH} = -8\text{mA}$	90% V_{CC}	—	V
CMOS Load	L_{CMOS}	CMOS Output	—	15	pF
Input Voltage Range	V_{IN}		0	V_{CC}	V
Low Level Input Voltage	V_{IL}		—	30% V_{CC}	V
High Level Input Voltage	V_{IH}		70% V_{CC}	—	V
Disable Time	t_{dis}		—	150	ns
Enable Time	t_{ena}		—	5	ms
Start-up Time	t_{str}	@Minimum operating voltage to be 0 sec.	—	10	ms
1 Sigma Jitter	J_{Sigma}	Measured with Wavecrest SIA-3000	$1.8 \leq f_o < 40\text{MHz}$	—	8
			$40 \leq f_o \leq 100\text{MHz}$	—	5
			$100 < f_o \leq 170\text{MHz}$	—	4
Peak to Peak Jitter	J_{PK-PK}	Measured with Wavecrest SIA-3000	$1.8 \leq f_o < 40\text{MHz}$	—	80
			$40 \leq f_o \leq 100\text{MHz}$	—	40
			$100 < f_o \leq 170\text{MHz}$	—	30

Note: All electrical characteristics are defined at the maximum load and operating temperature range.
 Please contact us for inquiry about operating temperature range, available frequencies and other conditions.

Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

